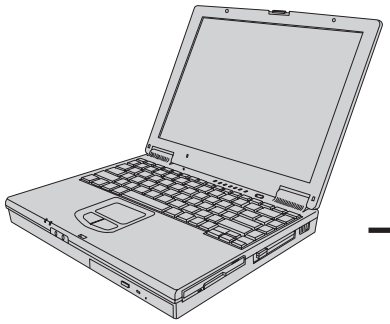
Panasonic®



Personal Computer

OPERATING INSTRUCTIONS

CF-47 Series

TOUGHBOOK

95 98

[Additional Manual]

Reference Manual

This manual can be accessed on your computer. Please refer to page 19 on how to access the Reference Manual.

Contents

- Key Combinations
- LED Indicators
- Panasonic Hand Writing (Touch Pad)
- Suspend/Hibernation Functions
- Security Measures
- Computing On the Road
- Battery Power
- Using PC Cards
- Adding Memory
- Port Replicator
- Using a Printer
- Using an External Display
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- Hard Disk Drive
- Setup Utility
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- List of Error Codes
- DMI Viewer
- Dealing With Problems

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Customer's Record

Model No.*	Dealer's Name
Serial No.	
or	
Code No.	Dealer's Address
Date of Purchase	

For the Model No., insert the 11 digit number (for example, CF-47EY6GJEM) located on the bottom of the computer.

Introduction

Thank you for purchasing the Panasonic computer. Please read the operating instructions thoroughly for proper operation of your new computer.

Illustrations in this Manual

NOTE:	**NOTE** provides a useful fact or helpful information.
CAUTION:	**CAUTION** indicates a condition that may result in minor or moderate injury.
WARNING:	**WARNING** indicates a hazard that may result in moderate or serious injury.
[Start]-[Shut Down]:	This illustration means to click [Start], then to click [Shut Down]. (For some applications, you may need to double-click.)
Enter :	This illustration means to press the [Enter] key.
Fn + F5 :	This illustration means to press and hold the [Fn] key, then press the [F5] key.
Windows 95 :	Information for Microsoft Windows® 95 users.
Windows 98 :	Information for Microsoft Windows® 98 users.
☞ :	Where to go for referred information.
	☞ Reference Manual : This illustration means to refer to the Reference Manual, which is available on your computer. Please refer to page 19 on how to access this manual.

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For U.S.A.

Federal Communications Commission Radio Frequency Interference Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the Panasonic Service Center or an experienced radio/TV technician for help.

Warning

To assure continued compliance, use only shielded interface cables when connecting to a computer or peripheral. Also, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Responsible Party: Matsushita Electric Corporation of America
One Panasonic Way
Secaucus, NJ 07094
Tel No:1-800-LAPTOP-5 (1-800-527-8675)

FCC Regulation Notice for modem
This equipment contains a FCC approved modem.

Manufacturer of modem: Xircom
Model No. MPCI2B-56G

Tested To Comply With FCC Standards
FOR HOME OR OFFICE USE

1. This equipment complies with Part 68 of the FCC rules. On the computer is a label that contains, among other information, the FCC registration number and ringer equivalence number(REN)for this equipment. If required, this information must be provided to the telephone company.
2. An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. See Installation Instructions for details.
3. The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all area, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.
4. If your telephone equipment cause harm to the telephone network, the telephone company will notify you in advice that temporary discontinuance of service may be required. But if advice notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.
5. The telephone company may take changes in it's facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.
6. If trouble is experienced with this equipment, for repair or warranty information, please contact Matsushita Electric Corporation of America at DIAL TOLL FREE 1-800-LAPTOP5. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.
7. There are no user serviceable parts contained in this equipment.
8. This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.
9. The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entry, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. In order to program this information into your fax software, you should refer to the manual of the Fax software being used.

For Canada

Industry Canada (IC) Notice for modem

This equipment contains an Industry Canada approved modem unit. The Industry Canada label is affixed on the modem unit.

EQUIPMENT ATTACHEMENT LIMITATIONS

"NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas. Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate."

"NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5."

REN: See bottom of the computer

RESTRICTIONS CONCERNANT LE RACCORDEMENT DE MATÉRIEL

"AVIS: L'étiquette d'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme aux normes de protection, d'exploitation et de sécurité des réseaux de télécommunications, comme le prescrivent les documents concernant les exigences techniques relatives au matériel terminal. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être coordonnées par un représentant désigné par le fournisseur. L'entreprise de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales. Avertissement: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.""AVIS: L'indice d'équivalence de la sonnerie (IES) assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être raccordés à une interface. La terminaison d'une interface téléphonique peut consister en une combinaison de quelques dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de touts les dispositifs n'excède pas 5."

REN: Voir sous le fond de l'ordinateur

Lithium Battery

Lithium Battery!

This computer contains a lithium battery to enable the date, time, and other data to be stored in it.
The battery should only be exchanged by service personnel.
Warning! Risk of explosion from incorrect installation or misapplication!

Warnung bezüglich der Lithiumbatterie (Sicherungsbatterie)

Lithiumbatterie!
Dieser Computer enthält eine Lithiumbatterie zur Sicherung von Datum und Uhrzeit der eingebauten Uhr sowie anderer Systemdaten im Speicher bei einer Unterbrechung der Hauptstromversorgung. Diese Sicherungsbatterie darf nur von Kundendienstpersonal ausgewechselt werden.
Warnung! Bei falschem Gebrauch besteht Explosionsgefahr!
Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

Avertissement concernant la pile au lithium (pile de sauvegarde)

Pile au lithium!
Le micro-ordinateur renferme une pile au lithium qui permet de sauvegarder certaines données comme la date et l'heure notamment. Elle ne devra être remplacée que par un technicien qualifié.
Avertissement! Risque d'explosion en cas de non respect de cette mise en garde!

CD-ROM Drive Caution

CAUTION!

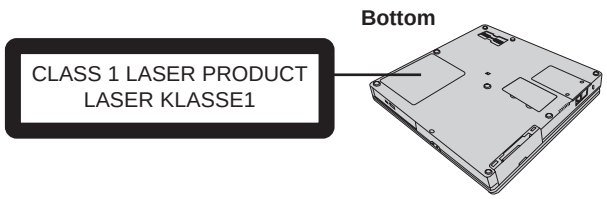
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS, ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF.
REFER SERVICING TO QUALIFIED PERSONNEL

WARNUNG!

DIESES PROUKT ERZEUGT LASERSTAHLUNG.
DURCHFÜHRUNG ANDERER VORGÄNGE ALS DER HIER ANGEGEBENEN KANN ZU GEFÄHRLICHER STRAHLUNG FÜHREN.
REPARATUREN DÜRFEN NUR VON QUALIFIZIERTEM FACHPERSONAL DURCHGEFÜHRT WERDEN.

AVERTISSEMENT!

CET APPAREIL UTILISE UN LASER.
L'UTILISATION DE COMMANDES OU DE RÉGLAGES OU L'EXÉCUTION DE PROCÉDURES AUTRES QUE CELLES SPÉCIFIÉES ICI PEUVENT PROVOQUER UNE EXPOSITION À DES RADIATIONS DANGEREUSES.
NE PAS OUVRIR LES COUVERCLES NI ESSAYER DE RÉPARER SOI-MÊME.
CONFIER TOUT TRAVAIL D'ENTRETIEN À UN PERSONNEL QUALIFIÉ.



Precautions

Usage

Avoid Extreme Heat and Cold

Do not store or use the computer in locations exposed to heat, direct sunlight, or extreme cold. Avoid moving the computer between locations with large temperature differences.
Operation: 5 ºC to 35 ºC (41 ºF to 95 ºF)
Storage: -20 ºC to 60 ºC (-4 ºF to 140 ºF)

Avoid Direct Sunlight on the LCD Panel

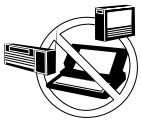
The LCD panel should not be exposed to direct sunlight or ultraviolet light.

Avoid Humidity, Liquids and Dust

Do not store or use the computer in locations exposed to high humidity, liquids (including rain) or dust.

Prevent Shock

Avoid subjecting the computer to severe vibrations or impact. Do not place the computer inside a car trunk.



Avoid Radio Frequency Interference

Do not place the computer near a television or radio receiver.

Avoiding low-temperature burns

Avoid more than casual contact with any heat producing area of the notebook computer, power adapter, and any option or accessory you use with it. Even low heat, if warmer than body temperature, can cause a burn, if the skin is exposed to the heat source for a long enough period of time.

Handling

Avoid Magnetic Fields

Keep the computer away from magnets.

Avoid Stacking

Do not place heavy objects on top of the computer.

Keep Small Objects Away

Do not insert paper clips or other small objects into the computer.

Do Not Disassemble the Computer

Do not attempt to disassemble your computer.

Avoid Excessive Force on the Display

Do not apply excessive downward force on the display when it is completely opened, especially when plugs and/or cables are connected to the rear of the computer.

Peripherals

Incorrectly using peripheral devices may lead to a decrease in performance, an increase in temperature and/or damage your computer. For more information on peripheral devices, please refer to the Reference Manual.

Cables

Use of an interface cable longer than 3 m (9.84 feet) is not recommended.

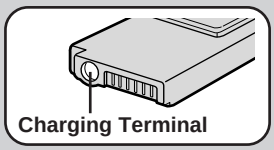
Precautions

Peripherals

Incorrectly using peripheral devices may lead to a decrease in performance, an increase in temperature and/or damage your computer. For more information on peripheral devices, please refer to the Reference Manual.

CAUTION

The charging terminal of the battery pack is used with the battery charger, which is sold separately.



Never connect anything to the charging terminal other than the exclusive adapter that is supplied with the battery charger. Doing so could damage the device connected to the battery pack, the cable, and the battery pack itself. It could also result in overheating or bursting.

- Care should be exercised with regard to the following in order to avoid the possibility of liquid leakage, overheating, or bursting.

Avoid Heat
Do not throw the battery pack into a fire or expose it to excessive heat.

Keep Articles Away
Do not place the battery pack together with articles such as necklaces or hairpins when carrying or storing.

Do Not Disassemble
Do not insert sharp objects into the battery pack, expose it to bumps or shocks, deform, disassemble, or modify it.

Do Not Short
Do not short the positive (+) and negative (-) contacts.

Avoid Extreme Heat, Cold and Direct Sunlight
Do not charge, use or leave the battery pack for extended periods where it will be exposed to direct sunlight, in a hot place (in an automobile on a sunny day, for example), or in a cold place.

Do Not Use With Any Other Computer
The battery pack is rechargeable and was intended for the specified computer or charger. Do not use it with a computer other than the one for which it was designed.

Do Not Put into a Microwave
Do not put the battery pack into a microwave oven or a pressurized chamber.

Discontinue Use
Should the battery emit an abnormal odor, become hot to the touch, become discolored, change shape, or become in any way different from normal, remove it from the computer or charger and discontinue use.

- Do not touch the terminals on the battery pack. The battery pack may no longer function properly if the contacts are dirty or damaged.
- Do not expose the battery pack to water, or allow it to become wet.
- If the battery pack will not be used for a long period of time (a month or more), charge or discharge (use) the battery pack until the remaining battery level becomes 30% to 40% and store it in a cool, dry place.
- This computer prevents overcharging of the battery by recharging only when the remaining power is less than approx. 95% of capacity.
- The battery pack is not charged when the computer is first purchased. Be sure to charge it before using it for the first time. When the AC adapter is connected to the computer, charging begins automatically.
- Should the battery leak and the fluid get into your eyes, do not rub your eyes. Immediately flush your eyes with clear water and see a doctor for medical treatment as soon as possible.

NOTE

- The battery pack may become warm during recharging or normal use. This is completely normal.
- Recharging will not commence outside of the allowable temperature range (0 °C to 45 °C (32°F to 113 °F)) ☞ Reference Manual "Battery Power". Once the allowable range requirement is satisfied, charging begins automatically. Note that the recharging time varies based on the usage conditions. (Recharging takes longer than usual when the temperature is 10 °C (50 °F) or less.)
- If the temperature is low, the operating time is shortened. Only use the computer within the allowable temperature range.
- Although the battery has remaining capacity, the battery indicator may light up red or emit a beep. This indicates a significant rise in the temperature (60 °C (140 °F) or more) of the battery pack ☞ Reference Manual "Battery Power". This is typically caused by the fact that the battery pack has been delivering a high level of power because the computer has been used with the display at the brightest setting and with the power-saving function off.
  To protect the battery pack from increases in temperature, the brightness of the display automatically decreases, allowing the temperature of the battery to drop. In this condition, if the computer is left as is, it will automatically go off after about three minutes have elapsed. Within that period, therefore, be sure to connect the AC adapter or shut the computer OFF after saving any open data (if necessary).

Read Me First

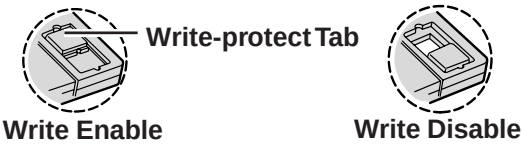
Saving Data on the Hard Disk

- **Do not expose your computer to shock.**
  Please use care when handling your computer, shock may damage your hard disk or make your software applications and data unusable.
- **Do not power down your computer while software applications are running or HDD indicator (⛁) is on.**
  Properly shut Windows* down to avoid problems ([Start]-[Shut Down]).
- **Save all valuable data to floppy disks.**
  Backing up data to floppy disks will limit damage should trouble occur to your computer or should you inadvertently change or erase data.
- **Use the security function for all important data.** (☞ Reference Manual "Security Measures")

* Windows 95 : This computer uses Microsoft® Windows® 95 Operating System.
Windows 98 : This computer uses Microsoft® Windows® 98 Operating System.

Saving Data on Floppy Disks

- **Do not power down your computer or press the floppy disk drive eject button while the FDD indicator (▭) is on.**
  Doing so may damage the data on the floppy disk and render the disk useless.
- **Use care when handling floppy disks.**
  To protect the data on your floppy disks or to prevent a floppy disk from becoming stuck in your computer, avoid the following:
  • Sliding the shutter on the floppy disk manually.
  • Exposing the disk to a magnetic field.
  • Storing the disk in locations prone to high temperatures, low pitched noise, dampness, or dust.
  • Applying more than one label on the disk.
- **Confirm the contents of a floppy disk before formatting it.**
  Confirm that no important data is on the disk, because all data on the disk will be erased.
- **Use the write-protect tab.**
  This is a must for preserving important data. This prevents your data from being erased or overwritten.



Computer Viruses

- **Users are advised to purchase the latest versions of virus protection software and use them regularly.**
  We recommend you run the software:

  • When booting your computer.
  • After receiving data.

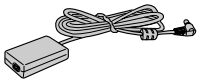
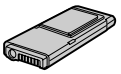
  We recommend that you check data received on floppy disks or from external sources, such as data downloaded from the Internet, e-mail, etc. (For compressed files, please uncompress them before running a check).

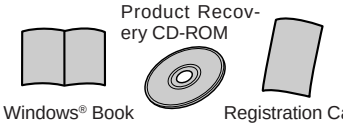
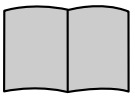
First-time Operation

Please read the steps below to help you learn what parts are included, and to gain an understanding of some basic computer-related operations.

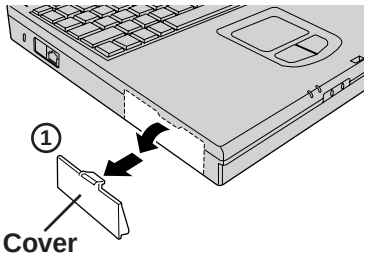
1 Confirm the inclusion of all parts

Make sure the parts shown in the figure have been supplied. If any of these items are missing or is not working properly, please contact Panasonic Technical Support.

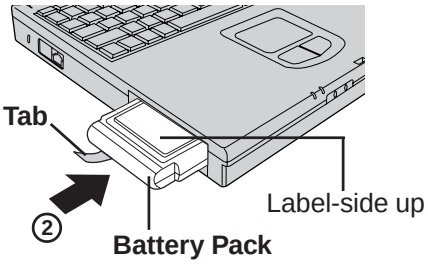
AC Adapter 1	AC Cord 1	Battery Pack ...1	Modem Telephone Cable . 1
 CF-AA1639		 CF-VZSU09	

Windows System Pack 1	Operating Instructions ...1
 Windows® Book Product Recovery CD-ROM Registration Card	

2 Connect the battery pack



① Remove the outside cover for the battery pack.



② Push the pack in until it is in place.

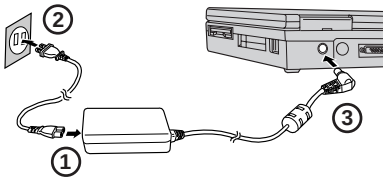
CAUTION

Be sure the battery pack is properly connected to the connector.
If the battery indicator goes ON when the AC adapter is connected (☞page 9, Step ***3***), this indicates that the battery pack is properly connected.

③ Reattach the outside cover.
Be sure the tab does not get caught when closing the cover.

CAUTION

For an improperly attached cover, your battery pack may fall out while you are carrying around your computer.



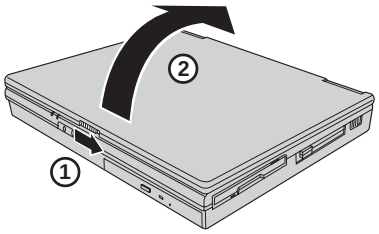
3 Connect your computer to a power outlet

CAUTION

Be sure the AC adapter is connected until completing Step ***9*** on page 11.

Handling the AC adapter

- Do not twist or pull the AC power cord forcefully. Doing so may damage the connections.
- Use only the specified AC adapter with your computer. Using an AC adapter other than the one supplied might damage the battery and/or the computer.
- When the DC plug is not connected to the computer, disconnect the AC cord from your AC wall outlet.
- Problems such as sudden voltage drops may arise during periods of thunder and lightning. Since this could adversely affect your computer, an uninterruptible power source (UPS) is highly recommended unless the battery pack is installed.



4 Open the display

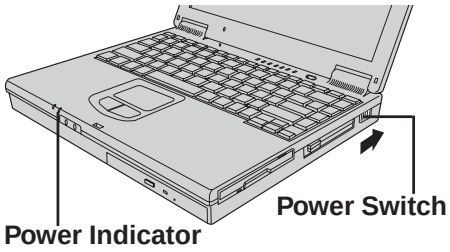
To open the display, slide the latch located at the front and lift open the display.

5 Read the LIMITED USE LICENSE AGREEMENT (☞page 27)

Before removing the seal covering the power switch, please read the LIMITED USE LICENSE AGREEMENT.

6 Turn your computer on

Slide the power switch toward the rear of the computer and hold it for approximately one second until the power indicator turns on before releasing it.



CAUTION

- Do not slide the power switch repeatedly.
- Once the computer is powered off, you must wait at least ten seconds before powering it on again.

NOTE

Windows 95

The power saving function is factory set, so if there is no input from a key, the touch pad, or the external mouse for two minutes, the LCD is powered off (ECO mode). The LCD will resume operation when the touch pad or the external mouse is used or a key is pressed.

The computer may enter the ECO mode while Windows is setting up or even when an application software is being installed. In this case, because it is conceivable that a selection dialog box will be shown, for resuming from the ECO mode, do not press **Enter** which may trigger a selection, instead, press a key unrelated to the direct triggering of a selection, like the **Shift** key.

Windows 98

The power saving mode ([Power Scheme] in [Control Panel] - [Power Management]) is factory set, so if there is no input from a key, the touch pad, or an external mouse (when one is connected) for a certain interval of time, the power to the LCD is cut, and the power to the hard disk is shut off. In addition, when the computer is left alone, it automatically enters the suspend* mode (☞ Reference Manual "Suspend/Hibernation Functions").

The LCD will resume operation when the touch pad is used or a key, or an external mouse is pressed.

The power to the LCD may be turned off while Windows is setting up or even when an application software is being installed. In this case, because it is conceivable that a selection dialog box will be shown, do not press the **Enter** key to attempt to resume from this condition as doing so may trigger a selection, but instead, press a key unrelated to the direct triggering of a selection, like the **Shift** key.

*With Windows 98, "Suspend" is called "Standby".

7 Setup Windows

① Select settings for your region, then press [Next].

NOTE

Moving the cursor ( ) or clicking buttons can be performed with the touch pad (☞page 14).

② Select your keyboard layout, then press [Next].
(for U.S.A.: United States 101)

③ Enter your name and your company's name, then press [Next].
(It is possible to omit the company name item.)
The License Agreement will be displayed.

④ After reading the agreement, select [I accept the agreement] or [I don't accept the agreement], then press [Next].

NOTE

If [I accept the agreement] is selected, the [Certificate of Authenticity] will appear.
If [Idon't accept the agreement is selected, the Windows setup will be aborted.

⑤ Input the Product Number (Key) written on the "Certificate of Authenticity" located in the Windows® book provided with this computer then press [Next].

⑥ Press [Finish].

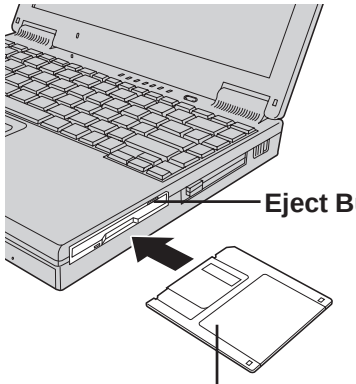
⑦ Windows 98
Type a name to identify yourself to Windows, and enter a password if you want to.

⑧ Input the correct time, date and time zone and press [Close] .
You can also complete these settings at a later time.

⑨ Press [Next] to complete the printer setup or [Cancel] to skip.

NOTE

- Simply follow the on-screen instructions. You can also complete these settings at a later time.
- Windows 98
  Press [Begin] as necessary. To close the window, click ☒ in the top right corner of the window.



Label-side up
Label on the top surface, and inserting the shutter-side headfirst.

8 Create floppy disks

Prepare 2HD floppy disks and make sure they are not in the write-protected state, then select [Start] - [Programs] - [Panasonic] - [Create FIRSTAID FD] and follow the on-screen instructions. Place a label identifying the contents on each disk.

- **Name of created backup disk**
  FIRSTAID FD

(When the display for creating the UPDATE FD is shown, create the disk by following the on-screen instructions.)

CAUTION

- Please store the floppy disks in a safe place. They will enable you to return your computer to close to the condition at the time of purchase should any problems occur.
  When creating floppy disks, do not run any other application program.
- When creating floppy disks and the message [Insufficient files to copy] is displayed, click [OK] and then contact Panasonic Technical Support.
- While the floppy disk drive indicator is on, do not remove the floppy disk, power down your computer or use the suspend or hibernation function (☞ Reference Manual "Suspend/Hibernation Functions").

9 Install Acrobat® Reader 3.01

NOTE

Use Acrobat® Reader to view the Reference Manual, which explains detailed operational procedures concerning your computer.

① In [Start] - [Run], input [c:\util\reader\ar32e301.exe], then press [OK].
When the [This will install Adobe Acrobat Reader 3.01. Do you wish to continue?] appears, press [Yes].

② Press [Next] and set up the Acrobat® Reader 3.01.

③ After reading the "Software License Agreement", select [Yes] if you agree to the terms.

④ Press [Next].

⑤ Press [Finish].

⑥ Press [OK].

This concludes the first-time use operation guidelines.

NOTE

When using the files in the following folders available on the retail version of the Windows CD-ROM, it is necessary to run a separate file decompression program.

Windows 95
\admin
\datalink
\drivers
\help
\other

Windows 98
\add-ons
\tools

To uncompress the file, it is necessary to have approximately 75 MB (Windows 95) /60 MB (Windows 98) of free disk space available on the hard disk.
To use the CD-ROM drive in MS-DOS mode, perform the operation below after modifying config.sys and autoexec.bat. (☞page 18)
File decompression method:

① Turn your computer on.

Windows 95

② When [Starting Windows 95] is displayed, press F8 .

Windows 98

② When [Press <F2> to enter SETUP] is displayed, immediately press Ctrl (until the menu is displayed).

③ Select [Command prompt only].
④ Insert the Product Recovery CD-ROM.
⑤ At the prompt, input the following:
L:\en\addfile Enter
Follow the message on the screen.

Windows 95

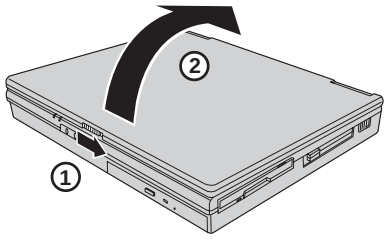
After this program is executed, the contents of the above folders will be decompressed to the c:\util\win95add folder.

Windows 98

After this program is executed, the contents of the above folders will be decompressed to the c:\util folder.

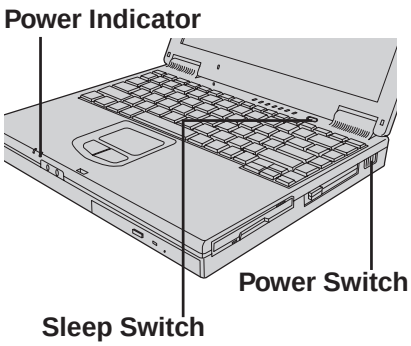
Starting Up/Shutting Down

Starting Up



1 Open the display

Slide the latch as shown and lift open the display.



2 Turn your computer on

The following two methods are available.

- Slide the power switch toward the rear of the computer and hold it for approximately one second until the power indicator turns on before releasing it.
- Press the sleep switch* and hold it until the power indicator turns on before releasing it.

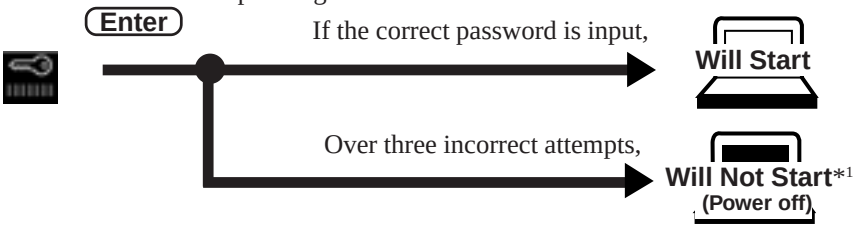
*Power cannot be turned on with the sleep switch when the power goes off by holding down the sleep switch for more than four seconds, or when both the AC adapter and battery pack are reconnected after having been disconnected.

CAUTION

- The computer will not power on when the display is closed.
- After confirming that the power indicator has turned on, avoid the following until Windows has completed loading.
  - Touching the power switch or the sleep switch.
  - Performing any keyboard or touch pad (or external mouse) operations.
  - Closing the display.
    If the display is closed while Windows is starting up, it is possible that color, etc., will not be displayed properly. Run the [MS-DOS Prompt] ([Start] - [Programs] - [MS-DOS Prompt]), and use full screen display mode by pressing Alt + Enter. After returning from the full screen mode (Alt + Enter again), the display will be shown correctly.
- Once the computer is powered off, you must wait at least ten seconds before powering it on again.
- When the CPU temperature rises, the computer may not power on to prevent the CPU from overheating. Should this happen, allow the computer to cool down then switch the power on again.
  If the computer still does not power on, please contact Panasonic Technical Support.
- If the computer has not been used for a long period of time, it may produce an unusual sound at start up. The sound may continue for a short period of time, but if the computer starts up in a normal manner, then the problem is not serious. If, however, the computer fails to start up, contact Panasonic Technical Support.

● If security indicator ( ) is displayed,

you must first enter your User Password (☞ Reference Manual "Security Measures")



*1 If you are starting from the suspend mode (☞ Reference Manual "Suspend / Hibernation Functions"), if after three attempts the correct password is not input, or if no password is entered for about a minute, the computer returns to the suspend mode.

● When an application or file that was previously displayed appears on your screen,

the suspend or hibernation mode (☞ Reference Manual "Suspend / Hibernation Functions") has been set.

3 Select your application

You are able to start working on your computer.

NOTE

- Windows 95

  The power saving function is factory set, so if there is no input from a key, the touch pad, or the external mouse for two minutes, the LCD is powered off (ECO mode).

  The LCD will resume operation when the touch pad or an external mouse (when one is connected) is used or a key is pressed.

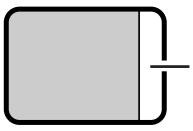
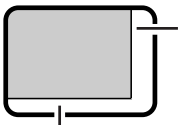
  Windows 98

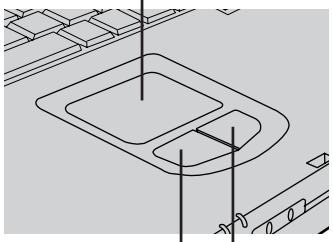
  The power saving mode ([Power Scheme] in [Control Panel] - [Power Management]) is factory set, so if there is no input from a key, the touch pad, or an external mouse (when one is connected) for a certain interval of time, the power to the LCD and hard disk is may be turned off (ECO mode). In addition, when the computer is left alone, it automatically enters the suspend mode (☞ Reference Manual "Suspend/Hibernation Functions").

  The LCD will resume operation when the touch pad or an external mouse (when one is connected) is used or a key is pressed.
- [System Devices] in [Start] - [Settings] - [Control Panel] - [System] - [Device Manager] may contain a device or devices bearing an exclamation mark or question mark. This does not indicate a malfunction. Such a mark (exclamation or question mark) will not be displayed if the operating environment of the device showing the mark is corrected, by for instance installing the driver of the device.

Using the Touch Pad

Use the touch pad to move the cursor on the display and perform normal computer operations. For instructions on how to handle the touch pad, refer to page 15.
The touch pad has the following two modes of operation.

Microsoft® IntelliMouse™ Wheel Mode (Setting at the time of purchase)	Original Mode
Wheel mode operations (almost identical to the case of using the Microsoft® IntelliMouse™ for scroll, zoom, etc., operations) are possible for Microsoft® wheel function-compatible applications. Microsoft® IntelliMouse™ is a mouse-type device that, in addition to the two conventional buttons, incorporates a wheel able to rotate forwards/backwards.	Only scroll operation is possible for applications not compatible with the Microsoft® wheel function. Even for applications compatible with the Microsoft® wheel function, there are cases where only vertical scrolling or only horizontal scrolling is possible in this mode.
Scrolling Area  **Scrolling up/down** For the Pan and Auto Scroll functions, the entire work surface of the touch pad can be used for scrolling.	**Scrolling Area**  **Scrolling up/down** Possible when a check mark ✓ is added for [Vertical]. **Scrolling side-to-side** Possible when a check mark ✓ is added for [Horizontal].



: Typical mouse operations use this area.
When no check mark is added for [IntelliMouse Wheel mode], [Horizontal] and [Vertical] of [Scroll Configuration], the entire surface can be used for typical mouse operations.

NOTE

When you are not sure whether an application is compatible with the Microsoft® wheel function or not, try using both modes. Furthermore, depending on the application, there are cases where scrolling may not be possible with either mode.

● Changing the mode of the touch pad

1 Select from the taskbar or select [Motion] in [Start] - [Settings] - [Control Panel] - [Mouse].

2 ● To set the Microsoft® IntelliMouse™ Wheel mode
Add the check mark ✓ for [IntelliMouse Wheel mode] of [Scroll Configuration].
● To set the original mode
Delete the check mark for [IntelliMouse Wheel mode] of [Scroll Configuration] and add the check mark ✓ for [Horizontal] and/or [Vertical].

3 Press [OK].

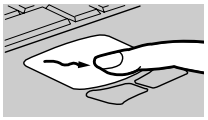
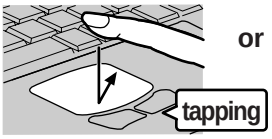
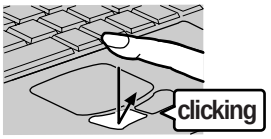
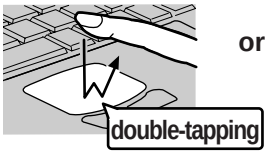
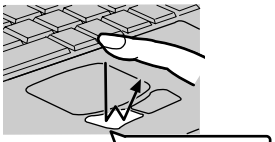
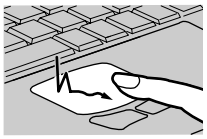
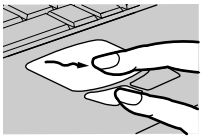
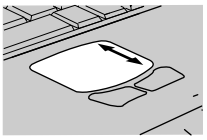
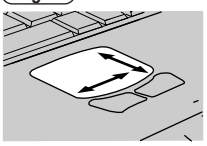
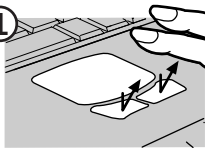
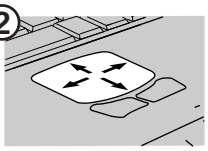
Handling the Touch Pad

- Do not place any object on the work surface or press down forcefully with sharp-pointed objects (i.e. nails), hard objects or objects leave marks (i.e. pencils and ball point pen).
- Do not allow things that could dirty the touch pad, such as oil. The cursor may not work properly in such cases.
- When the touch pad becomes dirty:
  Wipe to remove dirty areas by using a dry soft cloth such as gauze or a soft cloth first applied with detergent diluted with water and then thoroughly wrung.
  Do not use benzene or thinner, or disinfectant-type alcohol.

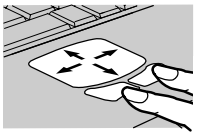
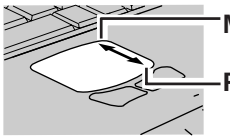
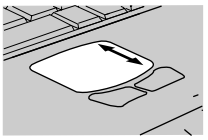
Basic Operation

(Wheel) Indicates an operation applicable to the Microsoft® IntelliMouse™ Wheel mode.

(Original) Indicates an operation applicable to the original mode.

Function	Touch Pad Operation
Moving the Cursor (Wheel) (Original)	 Move the tip of your finger lightly over the surface.
Tapping/Clicking (Wheel) (Original)	 or 
Double-Tapping/ Double-Clicking (Wheel) (Original)	 or 
Dragging (Wheel) (Original)	 or  Two quick taps, but on the second tap leaving your finger down (applying pressure) and moving it on the work surface. While holding down the button, moving your finger on the work surface. ● **When a check mark ✓ is added for [use Drag Lock]** * After the drag operation (above : left side), it is necessary to determine the destination (i.e., location of drop) by one tap. Under the condition no destination is selected, do not use the suspend or hibernation function. Nothing is shown on the display, even after resuming from the suspend or hibernation mode. In this case, the display will return after a tap or click is made. * In [Start] - [Settings] - [Control Panel] - [Mouse] - [Tap and Buttons]
Scroll* (Wheel) (Original) Scroll a document (rotate the wheel)	Wheel  Original 
Auto Scroll* (Wheel) Automatically scroll a document (move the mouse after clicking the wheel)	①  ②  Operate after pressing the two buttons simultaneously. ● **When releasing the auto scroll function:** One tap on the work surface.

The illustrations shown may differ from the actual physical appearances.

Function	Touch Pad Operation
Pan* (Wheel) Scroll in various directions of a document (move the mouse slightly while holding down the wheel)	 Operate while holding down the two buttons.
Zoom* (Wheel) Magnify/reduce the display of a document. (rotate the wheel while holding down (Ctrl))	(Ctrl) +  Magnify Reduce
Data Zoom* (Wheel) Display or hide a document, or perform operations to return to or proceed with Internet Explorer. (rotate the wheel while holding down (Shift))	(Shift) + 

Within the parentheses () are operations to follow when using an external Microsoft® IntelliMouse™.

* Indicates that the movements will differ depending on the application.

CAUTION

- When an external mouse or trackball with additional functions (e.g., wheel function) is connected, a part or all of the additional functions may not function. To use these additional functions, install the driver or application software of the external device by following the procedure below. However, once the driver or application software is installed, it is possible that part of the functions of the touch pad (e.g., auto scroll) will no longer operate even when the touch pad is enabled again (see the procedure for "When you want to re-enable the touch pad.").
  1. In [Control Panel] - [System] - [Device Manager], select [touch pad] in [Mouse], press [Remove] to delete it, then press [OK] to confirm the deletion.
  2. Power off your computer (☞ page 17) and connect the external mouse or trackball device to the computer.
  3. Turn the power on and run the Setup Utility (☞ Reference Manual "Setup Utility"). In [Main] menu, set [Touch Pad] to [Disable] and close the Setup Utility.
  4. Following the operating instructions for the connected external mouse, install the necessary driver.

  After the installation, be sure to [Disable] setting for [Touch Pad] of the Setup Utility.
  Do not enter the suspend or hibernation mode when an external mouse is connected to the serial port.

  When you want to re-enable the touch pad;
  1. In [Control Panel] - [System] - [Device Manager], when an external mouse or trackball device is displayed in [Mouse], press [Remove] to delete it, and then press [OK] to confirm the deletion.
  2. Power off your computer (☞ page 17) and remove the external mouse or trackball device.
  3. Turn the power on and run the Setup Utility (☞ Reference Manual "Setup Utility"). In [Main] menu, set [Touch Pad] to [Enable] and close the Setup Utility.
  4. Confirm whether [touch pad] exists in [Mouse] (in [Control Panel] - [System] -[Device Manager]).

(To next page)

CAUTION

When [PS/2 Compatible Mouse Port] is displayed in [Mouse]:

1. Select [PS/2 Compatible Mouse Port] and then press [Properties].
2. Select [Driver] - [Update Driver] and then press [Next].
3. Select [Display a list of all the drivers....] and then press [Next].
4. Press [Next].
5. At the [Update Driver Warning], press [Yes] and then press [Next].
6. At the [Insert Disk], press [OK].
7. Input [C:\util\drivers\mouse] and then press [OK].
8. Press [Finish].
9. The display will ask you to restart Windows, press [Yes].

NOTE

The double-tapping speed of the touch pad cannot be changed.

Shutting Down (power off your computer)

This procedure is shutting down without using the suspend or hibernation function.
(☞ Reference Manual "Suspend/Hibernation Functions")

1 Display the shut down screen

After saving important data and closing each application, select [Shut Down] from the [Start] menu.

NOTE

From the keyboard,

You may choose to press down on , then select the menu with ↑ or ↓.

2 Confirm shut down

Select [Shut down].

Your computer will power off automatically.

(In the OFF state, if you are not recharging your battery pack or if the pack is fully charged, your computer consumes approximately 1.5 W.)

● Restarting your computer (without shutting down)

Select [OK] after selecting [Restart].

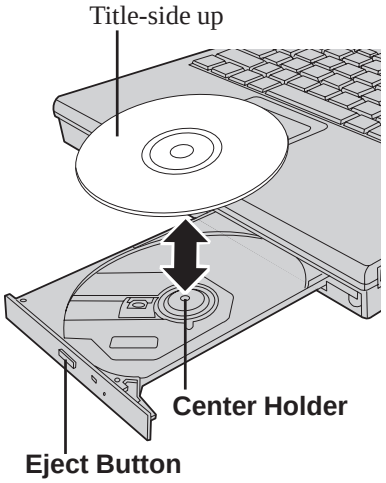
NOTE

To quickly resume computer operation after shutting down,

The suspend* or hibernation function is available. (☞ Reference Manual "Suspend/Hibernation Functions")

*With Windows 98, "Suspend" is called "Standby".

Using the CD-ROM Drive



Installing the CD

1 Turn your computer on

2 Press the eject button

3 Place the securely on the center holder

4 Close the tray

CAUTION

- Do not place items other than CDs on the tray.
- Do not leave the tray in the open position. **Also, do not touch the lens area with your fingers.**
- When the tray is opened, applying too much force to it could cause it to break.
- Do not open the CD-ROM drive or move the computer while an application is in the process of accessing the CD-ROM drive. Doing so could cause it to malfunction.
- Cleaning the CD-ROM drive using a CD lens cleaner (except the liquid type cleaner) is recommended if it malfunctions.
- Do not use the CD-ROM drive in a location where there is a lot of oily smoke or tobacco smoke. Doing so could shorten the service life of the lens.
- Never insert foreign objects such as paper clips into the slot in the CD-ROM drive.
- Do not use CDs that have become deformed (warped, not completely round, etc.).

Using the CD-ROM pack in the MS-DOS mode

1 Click the [Start] button then select [Shut Down].

2 Select [Restart in MS-DOS mode] and click [OK].

3 Open the "CONFIG.SYS" file for editing by issuing the following commands:
cd \ Enter
edit config.sys Enter

4 Move the cursor to the line containing "TEAC_CDI.SYS" or "OAKCDROM.SYS", and delete the characters "rem" at the beginning of the line. (Deleting "rem" causes the item to become valid.)
Windows 95 DEVICEHIGH=C:\WINDOWS\COMMAND\TEAC_CDI.SYS /D:MSCD000
Windows 98 DEVICEHIGH=C:\WINDOWS\COMMAND\OAKCDROM.SYS /D:MSCD000
(If this line is missing, add it.)

5 Press Alt + F , then S to save the file. Then press Alt + F, then X to exit the Edit program.

6 Follow the same steps to edit the "AUTOEXEC.BAT" file.
edit autoexec.bat Enter

7 Move the cursor to the line containing "MSCDEX.EXE" and delete the characters "rem" at the beginning of the line. (Deleting "rem" causes the item to become valid.)
LOADHIGH C:\WINDOWS\COMMAND\MSCDEX.EXE /D:MSCD000 /L:L
(If this line is missing, add it.)

8 Press Alt + F , then S to save the file. Then press Alt + F, then X to exit the Edit program.

9 Restart the computer.

About the "Reference Manual"

The Reference Manual can be accessed on your computer. When a printer is connected, it is also possible to print.
This manual explains functions for you to make greater use of the computer, such as how to add peripheral devices, how the Setup Utility works and other useful information.

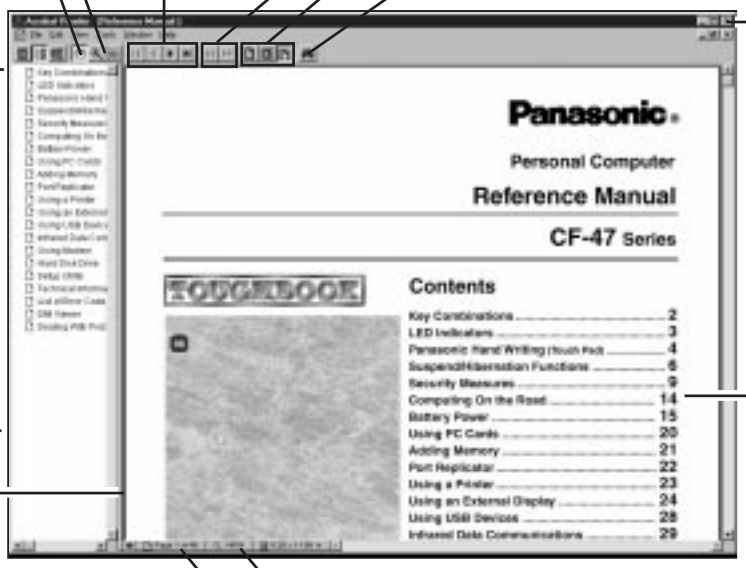
CAUTION

When you read the "Reference Manual", it is necessary to install the Acrobat Reader 3.01. (☞page 11)

Run the Reference Manual

1 **Turn your computer on**

2 **Select [Reference Manual] in [Start] - [Programs] - [Panasonic]**



Zoom-in

Hand tool
To move around the current page.

Display the page
Go forward or backward a page, or to the beginning or end of a document.

Cancel or correct an operation

Change the display size

Perform a "Find" operation

Exit

Table of Content (Items)
By clicking an item, the corresponding page will be displayed at 100%.

Display of the manual

Movable splitter bar
This bar can be dragged, for example, to the right to enlarge the display of the Table of Contents.

Change the display size
You can choose to magnify/de-magnify the display.

Page indicator
A desired page can be displayed by inputting the page number after clicking here.

CAUTION

- Illustrations may be difficult to view depending on the magnification. If this is the case, we recommend that the display be magnified.
- When the taskbar is hidden at the bottom portion of Acrobat® Reader, set the maximum display window size.
- If a printer is connected, we recommend printing the Reference Manual. The illustrations and display samples may not print with a high quality.

Handling and Maintenance

Usage Environment

Environment

- Place the computer on a flat stable surface.
- In use: Temperature: 5 °C to 35 °C (41 °F to 95 °F)
  Humidity: 30% to 80% RH (No condensation)
  Not in use: Temperature: -20 °C to 60 °C (-4 °F to 140 °F)
  Humidity: 30% to 90% RH (No condensation)

Places not to use your computer

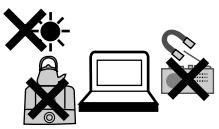
- Such areas may result in damage to the computer.

Areas exposed to direct sunlight

- Do not leave things near the computer that are sensitive to heat. During operation, the computer may become warm.

Areas with electronic equipment

These areas may interfere with your display or cause your computer to produce strange sounds.



Areas with extremely high/low temperatures

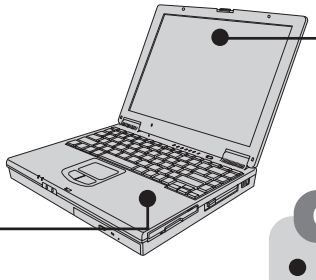
Handling

- Do not drop or hit your computer against solid objects. Do not stand the computer on its side or allow it to tip over. When the computer receives extremely strong shock after falling, the hard disk or floppy disk drive, etc., may become inoperable.
- It is a good idea to make backup copies on floppy disks and carry them with you.
- Do not leave a floppy disk in the drive while transporting your computer.
- Do not carry your computer when it is ON.
- Remove all cables before transporting your computer.
- We recommend preparing a fully charged battery (and optional charger, if possible).

When transporting spare batteries inside a package, briefcase, etc., it is recommended that the batteries be stored in a plastic bag.

- Do not carry the computer while the display is open, or carry it by gripping the display.
- Do not put anything (e.g., a piece of paper) between the display and keyboard.
- Always carry your computer with you. Never check it with luggage. For use of the computer inside an aircraft, we recommend asking the airlines regarding their policy on this issue.

Maintenance



Display:
Use a soft dry cloth like gauze to lightly wipe the display.

Areas excluding the display:
Wipe these areas with a soft cloth, after applying water or detergent diluted with water to the soft cloth and firmly wringing it.

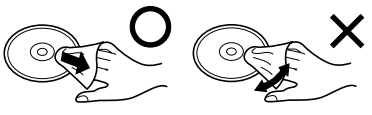
CAUTION

- Do not use benzene or thinner, or disinfectant-type alcohol.
- Do not directly use water, liquid detergents or spray-type cleaners. If liquid enters the computer, this may cause the computer to malfunction or become defective.

CD-ROM

- Do not allow CDs to become dirty or scratched.
- Do not place or store CD in locations exposed to heat, direct sunlight, humidity or dust.
- Do not write on the surface of the CD with a ball-point pen or other writing instrument, or apply label on the CD.
- Do not drop, bend, or place heavy objects on top of CDs.
- If the CD is brought from a cold into a warm environment, moisture may form on the disc. Wipe this moisture off with a soft, dry, lint-free cloth before using the CD.
- Cleaning the CD using a CD disc cleaner is recommended once every 2 or 3 months.

After wiping the CD with a moist, soft cloth, wipe it with a dry cloth. Always wipe from the center toward the edge.



List of Error Codes

The following is a list of the messages that BIOS can display. Most of them occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured. Following the list are explanations of the messages and remedies for reported problems.
If your system displays one of except the messages marked below with an asterisk (*), write down the message and contact Panasonic Technical Support. If your system fails after you make changes in the Setup menus, reset the computer, enter Setup and install Setup defaults or correct the error.

0200 Failure Fixed Disk
Fixed disk in not working or not configured properly. Check to see if fixed disk is attached properly. Run Setup. Find out if the fixed-disk type is correctly identified.

0210 Stuck key
Stuck key on keyboard.

0211 Keyboard error
Keyboard not working.

0212 Keyboard Controller Failed
Keyboard controller failed test. May require replacing keyboard controller.

0213 Keyboard locked - Unlock key switch
Unlock the system to proceed.

0220 Monitor type does not match CMOS - Run SETUP
Monitor type not correctly identified in Setup.

0230 Shadow RAM Failed at offset : *nnnn*
Shadow RAM failed at offset *nnnn* of the 64k block at which the error was detected.

0231 System RAM Failed at offset : *nnnn*
System RAM failed at offset *nnnn* of in the 64k block at which the error was detected.

0232 Extended RAM Failed at offset : *nnnn*
Extended memory not working or not configured properly at offset *nnnn*.

0250 System battery is dead - Replace and run SETUP
The CMOS clock battery indicator shows the battery is dead. Replace the battery and run Setup to reconfigure the system.

0251* System CMOS checksum bad - Default configuration used
System CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. The BIOS installed Default SETUP Values. If you do not want these values, enter Setup and enter your own values. If the error persists, check the system battery or contact Panasonic Technical Support.

0260 System timer error
The timer test failed. Requires repair of system board.

0270 Real time clock error
Real-time clock fails BIOS test. May require board repair.

0280* Previous boot incomplete - Default configuration used
Previous POST did not complete successfully. POST loads default values and offers to run Setup. If the failure was caused by incorrect values and they are not corrected, the next boot will likely fail. On systems with control of **wait states**, improper Setup settings can also terminate POST and cause this error on the next boot. Run Setup and verify that the wait-state configuration is correct. This error is cleared the next time the system is booted.

0281 Memory Size found by POST differed from CMOS
Memory size found by POST differed from CMOS.

02B0 Diskette drive A error

02B1 Diskette drive B error
Drive A: or B: is present but fails the BIOS POST diskette tests. Check to see that the drive is defined with the proper diskette type in Setup and that the diskette drive is attached correctly.

02B2 Incorrect Drive A type - run SETUP
Type of floppy drive A: not correctly identified in Setup.

02B3 Incorrect Drive B type - run SETUP
Type of floppy drive B: not correctly identified in Setup.

02D0 System cache error - Cache disabled
RAM cache failed and BIOS disabled the cache. On older boards, check the cache jumpers. You may have to replace the cache. See Panasonic Technical Support. A disabled cache slows system performance considerably.

02F0: CPU ID:
CPU socket number for Multi-Processor error.

02F4: EISA CMOS not writable
ServerBIOS2 test error: Cannot write to EISA CMOS.

List of Error Codes

02F5: DMA Test Failed

ServerBIOS2 test error: Cannot write to extended DMA (Direct Memory Access) registers.

02F6: Software NMI Failed

ServerBIOS2 test error: Cannot generate software NMI (Non-Maskable Interrupt).

02F7: Fail - Safe Timer NMI Failed

ServerBIOS2 test error: Fail-Safe Timer takes too long.

***device* address Conflict**

Address conflict for specified *device*.

Allocation Error for: *device*

Run ISA or EISA Configuration Utility to resolve resource conflict for the specified *device*.

CD ROM Drive

CD-ROM Drive identified.

Entering SETUP ...

Starting Setup Utility.

Failing Bits : *nnnn*

The hex number *nnnn* is a map of the bits at the RAM address, which failed the memory test. Each 1 (one) in the map indicates a failed bit. See error 230,231 or 232 for offset address of the failure in System, Extended or Shadow memory.

Fixed Disk *n*

Fixed disk *n* (0-3) identified.

Invalid System Configuration Data

Problem with NVRAM (CMOS) data.

I/O device IRQ conflict

I/O device IRQ conflict error.

PS/2 Mouse Boot Summary Screen:

PS/2 Mouse installed.

***nnnn* kB Extended RAM Passed**

Where *nnnn* is the amount of RAM in kilobytes successfully tested.

***nnnn* Cache SRAM Passed**

Where *nnnn* is the amount of system cache in kilobytes successfully tested.

***nnnn* kB Shadow RAM Passed**

Where *nnnn* is the amount of shadow RAM in kilobytes successfully tested.

***nnnn* kB System RAM Passed**

Where *nnnn* is the amount of system RAM in kilobytes successfully tested.

Operating system not found

Operating system cannot be located on either drive A: or drive C:. Enter Setup and see if fixed disk and drive A: are properly identified.

Parity Check 1 *nnnn*

Parity error found in the system bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????. Parity is a method for checking errors in binary data. A parity error indicates that some data has been corrupted.

Parity Check 2 *nnnn*

Parity error found in the I/O bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????.

Press <F1> to resume, <F2> to Setup, <F3> for previous

Displayed after any recoverable error message. Press <F1> to start the boot process or <F2> to enter a Setup and change the settings. Press <F3> to display the previous screen (usually an initialization error of an **Option ROM**, I.e., an add-on card). Write down and follow the information shown on the screen.

Press <F2> to enter Setup

Optional message displayed during POST. Can be turned off in Setup.

PS/2 Mouse:

PS/2 mouse identified.

System BIOS shadowed

System BIOS copied to shadow RAM.

UMB upper limit segment address : *nnnn*

Displays the address *nnnn* of the upper limit of **Upper Memory Blocks**, indicating released segments of the BIOS which can be reclaimed by a virtual memory manager.

Video BIOS shadowed

Video BIOS successfully copied to shadow RAM.

Dealing with Problems

When a problem occurs, please refer to this page. The "Reference Manual" also contains detailed information. If a problem appears to be related to a software application, read the software related manual. If you still cannot troubleshoot the problem, please contact Panasonic Technical Support.

● Starting Up

The power indicator or battery indicator is not lit	● Check the cable connection for the AC adapter. ● Check to see if a fully charged battery is properly installed. ● Remove the battery pack and disconnect the AC adapter, then connect them again.
or **is displayed**	Please input your password. If you have forgotten it, contact Panasonic Technical Support.
[POST Startup Error(s)] is displayed	☞ page 21
Windows startup, or an operation is extremely slow	Press F9 in the Setup Utility (☞ Reference Manual "Setup Utility"). This will restore the Setup Utility's settings to their default values (except the password settings). Then, the Setup Utility must be run once again for you to input the appropriate operating environment settings. (The processing speed depends on the application software used, so this operation may not cause the processing speed to increase.)
The date and time are incorrect	You can set the date and time through [Date/Time] in [Start] - [Settings] - [Control Panel]. If you continue to experience problems, the internal battery maintaining the clock may need to be replaced. Please contact Panasonic Technical Support.
When the previous item is not the cause	● Press F9 in the Setup Utility (☞ Reference Manual "Setup Utility"). This will restore the Setup Utility's settings to their default values (except the password settings). ● Try removing all peripheral devices. ● In the MS-DOS mode, run SCANDISK to check the hard disk. ● At start-up, press F8 (Windows 98 Ctrl) to operate the computer in the Safe mode.

● Battery Indicator

The red battery indicator lights. **Repeated beeping sound while the computer is in use.**	The battery level is low. Save your data and power off your computer. After connecting the AC adapter or replacing the battery pack with a fully charged one, turn your computer on.
The red indicator blinks	● The battery pack or recharging function may be defective. Quickly remove the battery pack and disconnect the AC adapter, then connect them again. ● If the problem persists, contact Panasonic Technical Support.
After the AC adapter is connected, the orange indicator blinks five times	Unable to charge because of an improper temperature range. (☞ page 6)

● Character Input

Unable to input anything but numerals	If **NumLk** and **Key Pad** are on, the Numeric Key Pad is ON. To switch it OFF, press Fn + Key Pad.
Only capital letters are being input	If **CapsLock** is on, the Caps Lock function is ON. To switch it OFF, press Caps Lock.
Windows 95 **How to input European characters (ß, à, ç), symbols or Euro Currency Symbol is unclear**	Select [Start] - [Programs] - [Accessories] - [Character Map]. The Character Map will be displayed. Point to the desired font name and select it.
Windows 98 **How to input European characters (ß, à, ç) or symbols is unclear**	Select [Start] - [Programs] - [Accessories] - [System Tools] - [Character Map]. The Character Map will be displayed. Point to the desired font name and select it.

Dealing with Problems

● Display

No display after powering on	● At the time of purchase, the display setting is preset for an external display. If you connect an external display, the screen is displayed on the external display. ● When there is no display to an external display, • Check your cable connection to the external display. • Confirm your display is powered on. • Check the settings for your external display. ● Try changing the display by pressing Fn + F3. ● When displaying only through an external display, if the computer is shut down by using the suspend or hibernation function, there will be no display on the LCD unless the external display is connected when operations are resumed. In this case, connect the external display.
The power has not been cut, but after a certain period of time, there is no display	● Has the computer been set to the power-saving mode? To resume operation of your computer from ECO mode, press any key. ● To save power, your computer may have automatically entered the suspend or hibernation mode. (☞ Reference Manual "Computing On the Road")
The resolution of the display cannot be changed	Set [None] for [Wallpaper] in [Start] - [Settings] - [Control Panel] - [Display] - [Background], and then press [OK]. Then, once again try changing the resolution. After the change, be sure to restart the computer.
An afterimage appears (i.e., green, red, and blue dots remain on the display) or there are dots not displaying the correct colors.	If an image is displayed for a prolonged period of time, an afterimage may appear. This is not a malfunction. The afterimage will disappear when a different screen is displayed. High-precision and advanced technologies are necessary in the production of color liquid crystal displays (color LCDs). Therefore, if 0.002% or less of the picture elements either fail to light or remain constantly lit (that is, more than 99.998% of elements are functioning properly), no defect is considered to exist.
The motion of the mouse cursor is not smooth	Select [Start] - [Settings] - [Control Panel] - [Mouse] - [Motion] and add the check mark ✓ for [Show trails].
The cursor does not move in scrolling area of the touch pad	When the Microsoft® IntelliMouse™ Wheel mode or the original mode is set for the touch pad, only scroll operations are possible for the right part or bottom part of the touch pad. In this case, cursor operations are possible by using the work surface excluding the right part or bottom part. When no mode is set, the entire surface of the touch pad can be used for cursor operations. (☞ page 14)
During simultaneous display, the screen of the external display becomes disordered	Try changing the display be pressing Fn + F3.

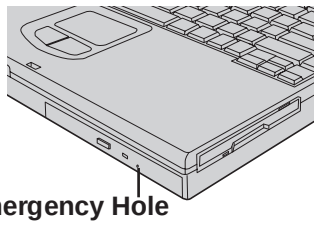
● Application Software

Computer hangs	● Press Ctrl + Alt + Del to reboot the computer. ● After powering down by pressing the sleep switch for more than four seconds, slide the power switch to power on and open the application again. If the program no longer works normally, go to [Start] - [Settings] - [Control Panel] - [Add/Remove Programs] to delete the program. Then, try installing the program once again.

● MPEG Files

Interfering noise is generated while an MPEG file is being played	If the AC adapter is disconnected and then connected while an MPEG file is being played, continuous interfering noise may be generated. In such cases, after the playback of the MPEG file ends, select [Disable All] for [Secondary Buffer] in [Control Panel] - [YAMAHA DS-XG Audio Config] - [DirectSound], and then press [OK].

● Disk Operations

Cannot read/write to a floppy disk	● Has the floppy disk been correctly inserted? ● Has the floppy disk been correctly formatted? ● Has the Setup Utility been used to set [Floppy Operation] to [Enable]? (☞ Reference Manual "Setup Utility") ● Your floppy disk content may be corrupted.
Unable to write to a floppy disk	Is the floppy disk write-protected?
How to format a floppy disk is unclear	Select [Format] in [My Computer] - [3 1/2 Floppy (A:)] - [File]. After confirming the disk volume and format type, start formatting.
Unable to read/write to the hard disk	● Your drive or file may not have been properly set. ● Check to see if the hard disk is full. If it is full, delete unnecessary files. ● Your hard disk content may be corrupted. Contact Panasonic Technical Support.
Trouble has occurred with the CD	You may need to clean the lens or CD; refer to (☞page 18) on how to do so.
When the previous item is not the cause	Try testing another drive or media.
The access lamp (⊘) does not light	Is the CD loaded on the tray correctly?
Cannot play CD or read data from it	Is the CD bent, scratched, or dirty?
Cannot eject CD	Is the computer powered on? To remove a CD when the computer is powered off, insert a sharp object such as the bent-out tip of a paper clip into the emergency hole. Pushing it completely to the end will free the tray so that it can be pulled out.  **Emergency Hole**
A blue background appears on the screen with the MPEG image	Did you open the CD-ROM drive or remove the MPEG CD while it was operating? Re-insert the MPEG CD and close the CD-ROM drive. Press **Enter**.
The CD-ROM drive vibrates a lot	Is the CD bent or labeled?
No sound from music CDs	In [Control Panel] - [Power] - [DS-XG Power], select [Full power level].

● Key Operation

If you change the video output destination by pressing Fn + F3 under the condition the full DOS screen is open (in [Start]-[Programs]-[MS-DOS Prompt]), when you close the MS-DOS screen by typing "Exit", the computer will return to the output destination existing at the time you entered the MS-DOS mode	Press **Fn** + **F3** again.

Reinstalling Software

Before Reinstallation

● Preparing

You will need the Product Recovery CD-ROM included in the Windows System Pack and the FIRSTAID FD you made earlier.

NOTE

If you have not created the FIRSTAID FD, you can create by selecting [Create FIRSTAID FD] in [Start] - [Programs] - [Panasonic]. If you can not create this disk, please contact Panasonic Technical Support.

● Important

- Save all important data. If reinstallation is carried out, all data existing prior to the installation will be lost. The reinstallation will return the computer to close to the conditions at time of purchase.
- Before the reinstallation procedure, remove all peripherals.
- Be sure the AC adapter is connected until the reinstallation procedure is completed.

Reinstalling

CAUTION

If data on your hard disk is compressed, the data should be uncompressed.

1. Turn the computer on.
2. When the message [Press <F2> to enter SETUP] is displayed, press F2 and then run the Setup Utility.
   If the password has been set, enter the supervisor password.
3. Press F9.
   At the confirmation message, select [Yes] and press Enter.
4. Select [Security] menu and set [Boot Up Drive] to [CDD/A:/C:].
5. Set the Product Recovery CD-ROM and FIRSTAID FD.
6. Press F10.
   At the confirmation message, select [Yes] and press Enter. The computer will reboot, and this screen should appear.

```
Select the number
-----------------------------------------------------
  1. Restore the whole HDD to factory default
  2. Restore the drive C to factory default
  3. End
```

7. Make a selection from the menu.

   To restore all contents of the hard disk to factory default, including the partition setting(s):
   Select [1. Restore the whole HDD to factory default].

   To restore the hard disk (C drive) to factory default, excluding the partition setting(s):
   Select [2. Restore the drive C to factory default].

NOTE

FAT16 file system is not supported.

8. At the confirmation message , press Y.
   The operations of “format” and “restore” for the hard disk start automatically. (The operations take about one hour.)
9. After the reinstallation procedure completes, the following message will appear on the display.

```
All data on the whole HDD has been restored to the factory default.
After removing floppy disk and the Product Recovery CD-ROM, restart the
computer and set up Windows .....
```

Restart the computer by pressing Ctrl + Alt + Del, and perform the setup procedure for Windows by following the instructions on the screen. ☞ page 10

NOTE

During the reinstallation procedure, the settings of the Setup Utility are changed as follows.
When necessary, please change these settings again.

Power Menu	Power Management	:Disable
	Sleep Switch	:No Action

When necessary, in the Setup Utility, set [Boot Up Drive] to [A:/C:].

Installing Acrobat® Reader 3.01

☞ page 11, Step *9*

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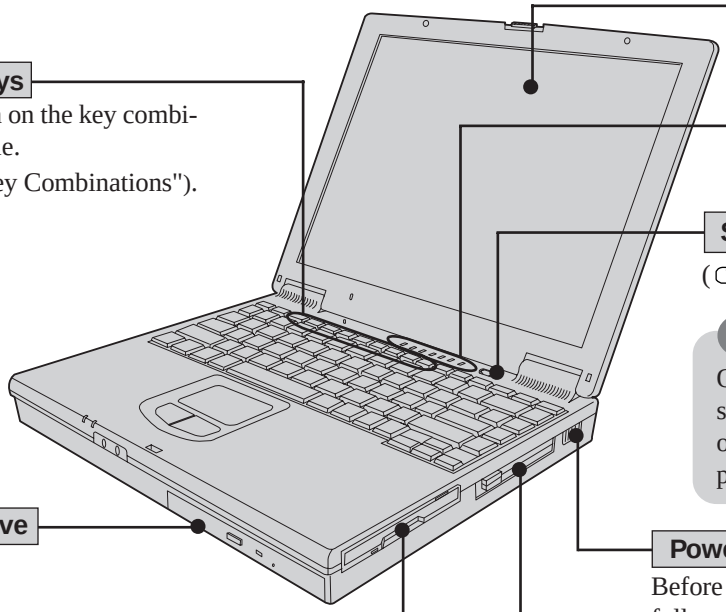
Names and Functions of Parts

The illustrations shown may differ from the actual physical appearances.



LCD

Function Keys
For information on the key combinations available.
(☞ Reference Manual "Key Combinations").

LED Indicators
(☞ Reference Manual "LED Indicators")

Sleep Switch
(☞ Reference Manual "Suspend/Hibernation Function")

CAUTION
Only when the computer locks up should the sleep switch be held more than four seconds to power off the computer. Data not previously saved will be lost.

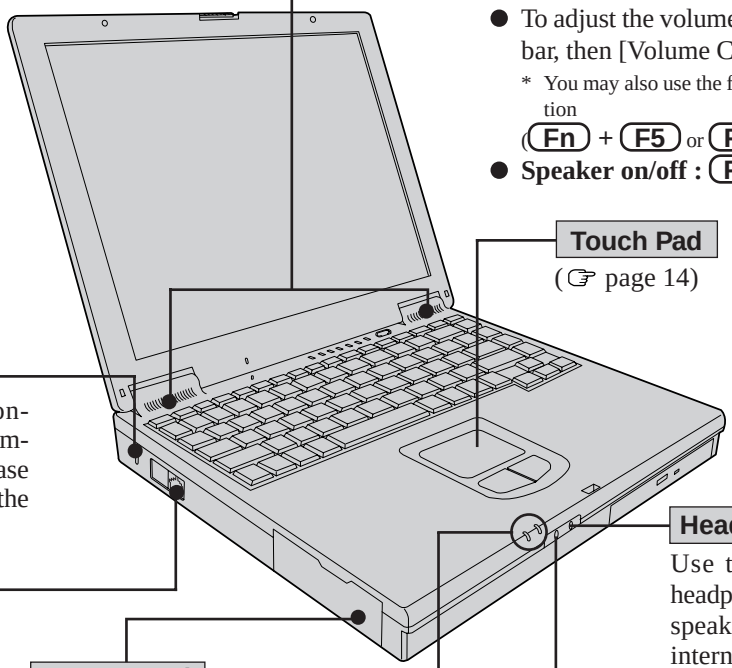
CD-ROM Drive
☞page 18

Power Switch
Before using the computer for the first time, carefully read the [Limited Use License Agreement]. If you agree to the conditions, remove the seal.

Floppy Disk Drive
or
SuperDisk™ Drive[*1]

PC Card Slots
(☞ Reference Manual "Using PC Cards")

[*1] SuperDisk™ and SuperDisk logo are trademarks of Imation Corp.



Speakers
- To adjust the volume*, select the on the task bar, then [Volume Control].
  * You may also use the function keys to perform this operation (Fn + F5 or F6).
- **Speaker on/off : Fn + F4**

Touch Pad
(☞ page 14)

Security Lock
A Kensington cable can be connected to prevent theft of your computer. For more information, please read the manual that comes with the cable.

Internal Modem
(☞ Reference Manual "Using Modem")

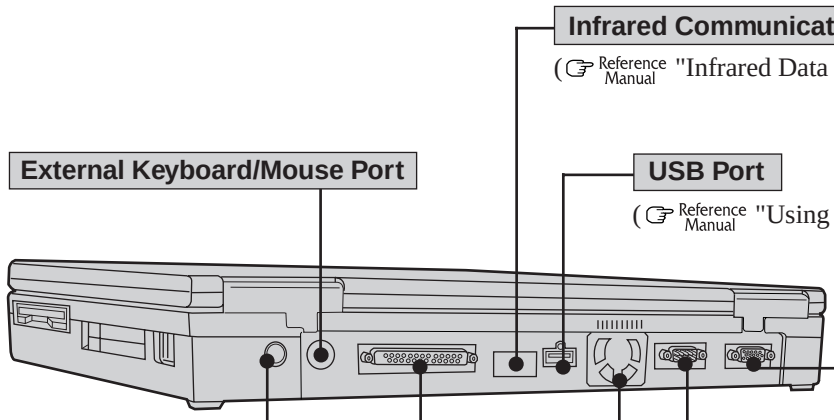
Battery Pack
(☞ Reference Manual "Battery Power")

Headphone Jack
Use this connector to connect headphones or amplifier-equipped speakers. Audio output from the internal speaker is disabled when headphones or external speakers are connected.

LED Indicators (☞ Reference Manual "LED Indicator")
Right: Power Indicator
Left: Battery Indicator

Microphone Jack
Use only a monaural condenser microphone. Using an input source other than a monaural condenser microphone may not allow audio to be input or may damage the equipment.

Names and Functions of Parts



Infrared Communication Port

(☞ Reference Manual "Infrared Data Communications")

External Keyboard/Mouse Port

USB Port

(☞ Reference Manual "Using USB Devices")

External Display Port

(☞ Reference Manual "Using an External Display")

DC-IN Jack

Parallel Port

(☞ Reference Manual "Using a Printer")

Serial Port

Ventilation Hole

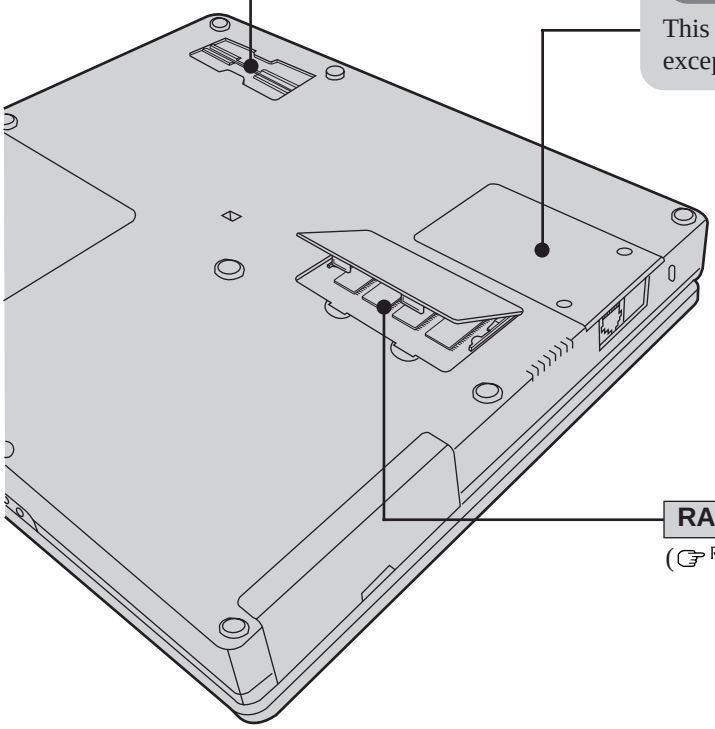
These holes allow heat to exit.

CAUTION

Do not block or place the computer in a location that may prevent proper ventilation.

Expansion Bus Connector

(☞ Reference Manual "Port Replicator")



CAUTION

This cover is not to be opened by anyone except authorized service personnel.

RAM Module Slot

(☞ Reference Manual "Adding Memory")

Specifications

Main Specifications

Model No.		CF-47EY6GAAM	CF-47FY6GAAM	CF-47EY6GJEM	CF-47FY6GUEM
CPU		Intel® Mobile Pentium® II Processor L1 Cache Memory: 32 KB L2 (Second) Cache Memory: 256 K			
		300PE MHz	333PE MHz	300PE MHz	333PE MHz
Memory (Expandable to)		64 MB (192 MB Max.)			
Video Memory		2.5 MB			
LCD	Type	13.3" (TFT)			
	Displayed Colors*1	256/65536/262144 colors (640 x 480 dots/800 x 600 dots/1024x768 dots)			
Hard Disk Drive		6.4 GB*2			
Operating System		Microsoft® Windows® 95 (FAT32 File System)		Microsoft® Windows® 98 (FAT32 File System)	

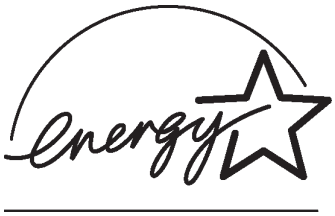
*1 800 x 600 16-color resolution is not supported. If this resolution is selected, the message "There is an error in the display settings" will appear when you reboot. Start up again, selecting 256 Colors, High Color (16 bits), or True Color (24 bits), following the instructions on the screen. Besides this phenomenon, you might encounter some unexpected behavior. Do not select 16 color mode in any resolution. A 16 M color display is achieved by using the dithering function.

*2 1GB = 10^9 bytes, 6.2 GB FAT32 partition + 200 MB special partition.

Other Specifications

Keyboard		87 keys		
Floppy Disk Drive		720 KB/1.44 MB (two-mode)		
CD-ROM Drive		24X speed (MAX)		
Slots		PC Card Slots	Two Type I or Type II, or one Type III	
			Allowable current (total for two slots)	3.3 V: 400 mA, 5 V: 400 mA, 12 V: 120 mA
		RAM Module Slot	144-pin, 3.3-V, SO-DIMM, SDRAM	
Interface		Parallel Port	Dsub 25-pin female	
		External Display Port	Mini Dsub 15-pin female	
		Serial Port	Dsub 9-pin male	
		Microphone Jack*1	Miniature jack, 3.5 DIA	
		Headphone Jack	Miniature jack, 3.5 DIA Impedance 32 Ω, Output Power 4 mW x 2	
		Infrared Communication Port	IrDA 1.1 compliant, 4 Mbps data transmission speed*2	
		External Keyboard/Mouse Port	Mini DIN 6-pin female	
		Expansion Bus Connector	Dedicated 100-pin female	
		USB Port	4-pin	
		Internal Modem	Data: 56 kbps (V.90 & K56flex) FAX:14.4 kbps	
Pointing Device		Touch Pad		
Speaker		Stereo Speaker (built in)		
Utility Programs		Setup Utility, DMI Viewer, Panasonic Hand Writing, Panasonic Battery Monitor		
Sound		PC'98 specification Compliant, Maximum 64-voice XG capital Wavetable, Synthesizer including GM compatibility, Sound Blaster Pro Compatibility		
Battery	Battery Pack	Lithium Ion 10.8 V, 4.5 Ah		
		Operating Time*3	Approx. 2.0 hours - 4.5 hours	
		Charging Time*3	Power On	Approx. 5.5 hours
			Power Off	Approx. 3.0 hours
	Clock Battery	Coin type lithium battery 3.0 V		
AC Adapter*4		Input	100V - 240 V AC, 50H z/60 Hz	Output 15.6 V DC, 3.85 A
Power Consumption		Approx. 50 W*5 (maximum when recharging in the ON state)		
Physical Dimensions (W X H X D)		307 mm X 45 mm X 253 mm (12.1 " X1.8 " X 10 ")		
Weight		Approx. 3.1 kg (Approx. 6.8 lb.)		

*1 Use only a monaural condenser microphone.
*2 Separate communications software is necessary.
*3 Varies depending on the usage conditions.
*4 The AC adapter is compatible with power sources up to 240 V AC adapter. This computer is supplied with a 125 V AC compatible AC cord.
*5 Approx. 1.5 W when the battery pack is fully charged (or not being charged) and the computer is OFF.



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Outline of the International ENERGY STAR® Office Equipment Program

The international ENERGY STAR® Office Equipment Program is an international program that promotes energy saving through the use of computers and other office equipment. The program backs the development and dissemination of products with functions that effectively reduce energy consumption. It is an open system in which business proprietors can participate voluntarily. The targeted products are office equipment such as computers, displays, printers, facsimiles, and copiers. Their standards and logos are uniform among participating nations.

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